## (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 4 August 2005 (04.08.2005)

**PCT** 

(10) International Publication Number WO 2005/071488 A1

- (51) International Patent Classification<sup>7</sup>: B41C 1/10
- G03F 7/027,
- (21) International Application Number:

PCT/EP2005/000489

- **(22) International Filing Date:** 19 January 2005 (19.01.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 10 2004 003 143.6 21 January 2004 (21.01.2004) DE
- (71) Applicant (for all designated States except US): KODAK POLYCHROME GRAPHICS GMBH [DE/DE]; An der Bahn 80, 37520 Osterode (DE).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): TIMPE,
  Hans-Joachim [DE/DE]; Baumhofstr. 165, 37520
  Osterode (DE). MÜLLER, Ursula [DE/DE]; Juessweg 6, 37412 Herzberg (DE).

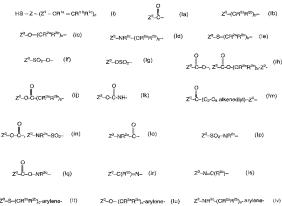
- (74) Agent: VOSSIUS & PARTNER; Siebertstrasse 4, 81675 Munich (DE).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG).

## **Published:**

with international search report

[Continued on next page]

## (54) Title: LITHOGRAPHIC PRINTING PLATE PRECURSORS WITH MERCAPTO-FUNCTIONALIZED FREE-RADICAL POLYMERIZABLE MONOMERS



(57) **Abstract:** Lithographic printing plate precursor comprising: a) an untreated or pretreated substrate and b) a radiation-sensitive coating comprising: (i) at least one polymeric binder soluble or swellable in aqueous alkaline developers; (ii) at least one free-radical polymerizable monomer and/or oligomer comprising at least one non-aromatic C-C double bond and at least one SH group in the molecule; and (iii) a radiation-sensitive initiator or initiator system for free-radical polymerization, wherein component (ii) has the formula (I) wherein each  $R^{1a}$ ,  $R^{1b}$  and  $R^{1c}$  is independently selected from H,  $C_1$ - $C_6$  alkyl,  $C_2$ - $C_8$  alkenyl, aryl, halogen, CN and COOR<sup>1d</sup>, wherein  $R^{id}$  is H,  $C_1$ - $C_{18}$  alkyl,  $C_2$ - $C_8$  alkenyl,  $C_2$ - $C_8$  alkynyl or aryl; and Z is an aliphatic, heterocyclic or heteroaromatic spacer or a combination of two or more thereof, wherein Z can optionally comprise one or more additional SH groups and/or one or more additional non-aromatic C-C double bonds; and each  $Z^1$  is independently selected from a single bond, formulae (Ia), (Ib), (Ic), (Id), (Ie), (Ig), (Ih), (Ij), (Ik), (Im), (In), (Io), (Ip), (Iq), (Ir), (Is), (It), (Iu), (Iv), wherein  $R^{2a}$ ,  $R^{2b}$  and  $R^{2c}$  are independently selected from H,  $C_1$ - $C_6$  alkyl and aryl,  $Z^2$  is selected from a single bond, O, S and  $NR^{2c}$ ,  $Z^3$  is a single bond which is connected to Z, b is an integer from 1 to 10 and c is an integer from 1 to 3.



## WO 2005/071488 A1



 before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.